

CMOS Camera

MV1-D1312C-160-CL-12

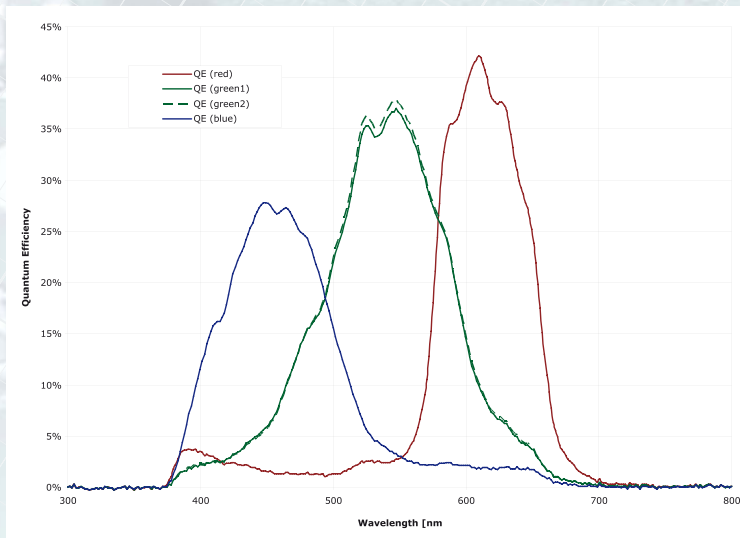
1.4 Megapixel resolution with proprietary Photonfocus sensor

Features

- Photonfocus A1312C CMOS image sensor
- 1312 x 1082 pixel resolution
- Integrated NIR cut-off filter⁽¹⁾
- Dynamic range up to 60 dB
- Up to 108 fps @ full resolution
- Global shutter
- Colour (RGB Bayer)
- Standard features
- CameraLink®
- 12 bit output format



Spectral response of the Photonfocus A1312C CMOS image sensor



MV1-D1312C-160-CL-12

Image sensor

Image sensor	Photonfocus A1312C (3. Generation)
Technology	CMOS active pixel (APS)
Scanning system	Progressive scan
Optical format / diagonal	1" (13.6 mm diagonal) maximum resolution 2/3" (11.6 mm diagonal) 1024 x 1024 resolution
Resolution	1312 x 1082 pixels
Pixel size	8 µm x 8 µm
Active optical area	10.48 mm x 8.64 mm (maximum)
Dark current	0.65 fA/pixel
Full well capacity	~100 ke ⁻
Spectral range	390 to 670 nm (to 10 % of peak responsivity) ⁽¹⁾
Responsivity	190 x 10 ³ DN / (J/m ²) @ 625 nm / 8 bit / gain = 1 (approximately 560 DN / (lux s) @ 625 nm / 8 Bit / gain = 1)
Quantum Efficiency	> 40 %
Optical fill factor	> 60 %
Dynamic range	60 dB in linear mode
Colour format	RGB Bayer (raw)
Characteristic curve	Linear
Shutter mode	Global shutter
Read out mode	Sequential or simultaneous read out (read out during exposure) for higher frame rates

Camera

Exposure time	10 µs ... 0.41 s / 25 ns steps
Frame rate	108 fps
Pixel clock	80 MHz
Camera taps	2
Greyscale resolution	8 bit / 10 bit / 12 bit
Fixed pattern noise (FPN)	TBD
Analogue gain	1
Digital gain	1 / 2 / 4 / 8
Configuration interface	CL SERIAL (9600 or 57600 Baud, user selectable)
Trigger modes	<ul style="list-style-type: none"> • Free running (non triggered) • Interface trigger • External trigger input • Software trigger
Features	<ul style="list-style-type: none"> • Region of Interest (ROI) • 512 Multiple ROI (MROI) • Image correction • 2 Look-up tables (LUT) • Constant frame rate • Digital fine gain • Colour fine gain • Temperature • Image information • Extended trigger input and strobe output functionality
Interface	CameraLink® Base
Operating temperature	0°C ... +50°C
Power supply	+12 V DC (±10%)
Power consumption	< 3.5 W
Lens mount	C-Mount (CS-Mount optional)
Dimensions	60 x 60 x 45 mm ³
Mass	265 g
Conformity	CE / RoHS / WEEE
Specials	Adjustable backfocus; Opto-isolated I/Os

Software

Camera control	PFRemote™ graphical user interface (GUI) and PFLib (SDK)
OS	win2k; winxp; winvista; other OS (Linux, QNX, etc) on request

⁽¹⁾ A1312C image sensor available without NIR cut-off filter on request